

**Appendix V**

**Summary of Existing Regulations**

**October 2000**

**Table 1: Existing Regulations for Mobile Source Engines**

Regulations	Description	Reference
<b>Federal</b>		
Commercial Marine Diesel Engines	The standards adopted by U.S. EPA for small- and medium-sized marine engines are similar to the Tier 2 HC + NOx standards for land-based off-road CI engines. The standards phase-in between 2004 and 2007. The federal rule does not cover large, international cargo ships, which emit the majority of air pollutants, but defers control to international treaty.	40 CFR Part 94
Aircraft Engines	The International Civil Aviation Organization and the U.S. EPA adopted standards for smoke emissions from aircraft engines.	40 CFR Part 87
Locomotive and Locomotive Engine Standards	The U.S. EPA adopted standards to be phased-in for NOx, hydrocarbons, CO, PM, and smoke for new locomotives and remanufactured locomotive and locomotive engines.	40 CFR Part 92
Urban Bus Retrofit /Rebuild Program	The U.S. EPA retrofit/rebuild program for urban buses applies to 1993 and earlier model year urban buses operating in metropolitan areas with 1980 populations of 750,000 or more.	40 CFR Part 85
Heavy-Duty Highway Engine and Vehicle Standards	The U.S. EPA has standards for on-highway heavy-duty vehicles. The standards apply to 1985 and later year engines. The most recently adopted standards will take affect in 2004. However, the SOP will be implemented in late 2002.	40 CFR Part 86
Off-road Diesel Engine Emissions Control Program	The U.S. EPA established a tiered progression to lower the emission standards for several categories of off-road engines. Each tier is phased in over several years by engine power category: Tier 1 2000-2004, Tier 2 2003-2006, Tier 3 2006+.	40 CFR Part 89
<b>State</b>		
Authority to Develop Mobile Source Regulations	CA law grants the ARB the responsibility for control of emissions from motor vehicles. [The federal CAA preempts CA from regulating new off-road construction and farm equipment with engines less than 175 hp and new locomotives.]	H&SC sections 39002, 39500, 43000 (c), 43101, and 43600
Heavy Duty Vehicle Inspection and Periodic Smoke Inspection Programs	This program reduces excessive smoke emissions and tampering with diesel-fueled vehicles over 6,000 pounds GVW.	HSC §§ 44011.6, 43701; 13 CCR §§ 2180 et seq.
Heavy Duty On-Road Vehicle Programs	For 1998, CA's emission standards and test procedures for heavy-duty on-road vehicles were designed to closely parallel the federal standards (see above).	13 CCR §§ 1956.8 et seq., 1965, 2036, 2112
Public Transit Bus Fleet Rule	This rule reduces diesel PM progressively with more stringent standards from 2002 – 2010 and a program that encourages transit agencies to purchase or lease low-emission, alternative fueled buses. Continued use of diesel buses mandates that the operator use ultra-low sulfur fuel.	13 CCR §§ 1956.1-1956.4, 1956.8

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Regulations	Description	Reference
Heavy Duty Off-Road CI Engine Program	Exhaust emission standards for off-road heavy-duty diesel engines become increasing more stringent, based on horsepower and the model year. CA's rule harmonizes with the federal program (see above).	13 CCR §§ 2420 et seq.
Small Off-Road Engine (<25 hp) and Equipment Program	This program, beginning with the 1995 model year, has applied progressively more stringent PM emission standards to small off-road engines. Future rulemaking will be coordinated along the entire range of off-road diesel-fueled engines.	13 CCR §§ 2400 et seq.
<b>Alternative Strategies</b>		
Carl Moyer Program established in 1998/1999 fiscal year	The Carl Moyer Memorial Air Quality Standards Attainment Program was primarily intended to be a NOx reduction program, but diesel PM has also been reduced. The Moyer program Advisory Committee has recommended diesel PM reductions as a goal of the program.	HSC § 44275 et seq. and ARB Guidelines
Locomotive Memorandum of Understanding (MOU)	This MOU is a voluntary agreement between the ARB, the Burlington, Northern, and Santa Fe Railway Company, and the Union Pacific Railroad to accelerate the introduction and use of cleaner, lower-emitting locomotives in the South Coast Air Basin. It was implemented in 1998.	Contact ARB
<b>Local</b>		
South Coast Air Quality Management District (SCAQMD)	The SCAQMD is in the process of adopting several rules to mandate purchase of clean vehicles when fleet owner are adding or replacing vehicles. Rules 1191, Light & Medium Duty Fleet Vehicles; 1192, Transit Buses; and 1193, Refuse Collection Vehicles, were adopted in June, 2000.	HSC section 40447.5; SCAQMD 1190 Series Rules

**Table 2: Existing Regulations for Stationary Engines**

Regulation	Description	Reference
Federal	The federal Clean Air Act established two distinct preconstruction permit programs (termed New Source Review) governing the construction of major new and modifying stationary sources. Sources constructing in nonattainment areas are required to apply the Lowest Achievable Emission Rate control technology to minimize emissions and to "offset" remaining emissions with reductions from other sources. Sources constructing in attainment or unclassified areas are required by the Prevention of Significant Deterioration requirements to apply the Best Available Control Technology and meet additional requirements aimed at maintaining the region's clean air.	Nonattainment: CAA Title I, Section 172 (b)(5) and 40 CFR 51.165  Attainment/Unclassified: CAA Title I, Section 165(a) and 40 CFR 51.166

**Table 2: Existing Regulations for Stationary Engines**

Regulation	Description	Reference
Federal (cont.)	In addition, the Federal Clean Air Act requires all major sources subject to federal NSR to obtain federal Title V operating permits governing continuing operation	Operating Permits: CAA Title V, Section 502(a) and 40 CFR Part 70
State	The state Health and Safety Code requires nonattainment areas for CO, NOx, VOC and SOx to design permit programs for new and modified stationary sources with the potential to emit above specified levels to achieve no net increase in emissions. Such areas must also require Best Available Control Technology on new and modified stationary sources.	H&S Code Sections 40918 – 40920.5
State (cont.) AB 2588 “Hot Spots” Requirements	The overall goal of the Air Toxics “Hot Spots” program is to develop a statewide inventory of toxic emissions, determine individual facilities health risk, and require the development and implementation of risk reduction and audit plans where significant health risks are identified. ARB works with local air districts and Cal/EPA's Office of Environmental Health Hazard Assessment to compile emissions data from individual facilities and assess health risks posed by those emissions. Owners/operators of diesel-fueled engines may be subject to some or all of these requirements.	H&SC Sections (44300-44394)
Local	The state Health and Safety Code allows local districts to establish a permit system that requires any person who builds, erects, alters, replaces or operates equipment or machinery which may cause the issuance of air contaminants to obtain a permit from the district. All districts in California have adopted permit programs. Generally, the local districts incorporate the state and federal permitting requirements into their preconstruction and operating permit programs. Some districts issue separate federal permits. In addition, for particulate matter, nothing restricts the authority of a district to adopt regulations to control suspended particulate matter or visibility reducing particles.	H&S Code Section 42300 H&S Code Section 40926
RACT/BARCT	Many air districts in California adopt source or category-specific rules to reduce emissions from existing stationary sources. The required levels of control (RACT or BARCT control technology) for existing stationary sources depends on each air district's nonattainment classification (i.e., moderate, serious, severe, or extreme).	H&SC sections 40918 (a)(2), 40919 (a)(3), 40920 (a), and 40920.5 (a).

**Table 2: Existing Regulations for Stationary Engines**

Regulation	Description	Reference
Internal Combustion (IC) Engine Regulations	Thirteen districts have established regulations for stationary diesel-fueled IC engines and one district has established a regulation for portable engines. All 13 set NOx and CO standards. These regulations do not set standards for diesel PM.	H&SC sections 40918 (a)(2), 40919 (a)(3), 40920 (a), and 40920.5 (a).

**Table 3: Existing Regulations for Portable Engines**

Regulation	Description	Reference
Federal and State		
See Table 1 above for new off-road engine regulations		
State/Local		
The statewide portable equipment registration program	A uniform, voluntary statewide program for registration and regulation of portable engines and equipment. Air districts are responsible for enforcing the statewide registration program.	H&SC sections 41750 - 41755
Local Registration Program	A program available in some districts in lieu of New Source Review.	

**Table 4: Existing and Proposed Regulations for Diesel Fuel<sup>1</sup>**

<i>Regulation</i>	<i>Description</i>	<i>Reference</i>
Federal		
Registration of Fuels and Fuel Additives	All on-road diesel fuels and additives must be registered.	40 CFR part 79
Sale or Supply of Diesel Fuel for use in On-road Motor Vehicles	Prohibits the sale or supply of diesel fuel for use in on-road motor vehicles, unless the diesel fuel meets or exceeds formulation requirements including a sulfur content, by weight, no greater than 500 parts per million (ppmw).	40 CFR 80.29
State		
CARB Diesel Requirements	All diesel fuel sold or supplied in California for motor-vehicle use must meet or exceed formulation requirements including a sulfur content no greater than 500 ppmw. The average sulfur content of CARB diesel is between 100 and 120 ppmw.	13 CCR 2281, 13 CCR 2282, 13 CCR 2456(e)2
Fleet Rule for Urban Transit Bus Operators	Beginning July 1, 2002, transit agencies and companies that lease buses to transit agencies must participate in a program to retrofit diesel buses in their fleets, and operate their diesel buses on ultra-low-sulfur diesel fuel (< 15 ppmw.)	13 CCR 1956.2

<sup>1</sup> Table does not include optional requirements applicable to federal and CARB diesel fuel formulation requirements. Refer to references for optional requirements.

**Table 4: Existing and Proposed Regulations for Diesel Fuel<sup>1</sup>**

<i>Regulation</i>	<i>Description</i>	<i>Reference</i>
The statewide portable equipment registration program	Portable engines registered under this regulation shall use only fuels meeting the standards for California motor vehicles fuel (e.g. CARB diesel.)	13 CFR 2456